

THE FIRST RECORDS OF *PAPILIO MACHAON* L. IN ENGLAND

By Dr. RONALD S. WILKINSON*

While arranging the diverse and extensive data about early entomological observations in England discovered in James Petiver's papers (Sloane MSS., British Library), I have been able to record a number of obvious 'first' captures of British Lepidoptera. However, some cases have been more difficult, and have led to the investigation of sources far afield from the correspondence and notes of the gentle London apothecary-naturalist.

The matter of the butterfly which would be named *machaon* is one of these problems. The insect was well known to British naturalists of the seventeenth century as a Continental species, because accounts of it were published, accompanied by illustrations, in a number of European works. The first British imprint to 'describe' and figure *machaon* was the accretion last edited by Thomas Moffet and finally published as *Insectorvm sive minimorum animalium theatrvm* (London, 1634), where *machaon* appears on pp. 98 (catchword)-99. But few of the insects in the book are mentioned as English, and *machaon* is not among these.

John Ray, the earliest of the seventeenth-century workers usually regarded as the 'fathers' of scientific entomology in Britain, travelled on the Continent, and knew *machaon* from specimens collected in Europe. His posthumous *Historia insectorum* (London, 1710) contained an account of the butterfly; he noted (pp. 110-111) that he had *seen* [the imago] in Sussex and Essex ("inque *Sussexia* & *Essexia* provinciis hanc observavi") and the larva in Sussex. These data are hardly sufficient to establish first records, as they were presumably written after *machaon* was known by others to be a British species. But Ray's correspondence furnishes more evidence. In a letter of 17th July 1670 to his friend and Continental travelling companion John Willughby, Ray wrote from Middleton Hall, south of Tamworth, Warwickshire, that "This summer we found here the same horned *Eruca* [larva], which you and I observed about Montpelier, feeding on *Fœniculum tortuosum*. Here it was found on common Fennel. It hath already undergone the first change into a chrysalis, and we hope it will come out a butterfly before winter" (Ray, 1848). Of course this was the larva of *machaon*, and the Montpelier observation is substantiated by the later account (Ray, 1710). The Warwickshire record of the larva found by Ray in 1670 is thus the earliest precise one for *machaon* in Britain.

But subsequent accounts are so unclear that we must look to a later period for a documented capture of the imago. Here enter two more 'fathers', James Petiver and the Braintree apothecary and friend of Ray, Samuel Dale. In the 1690's, these two and Ray were collecting simultaneously and, as

* The American Museum of Natural History, New York, New York 10024.

Petiver's manuscript remains show, were all familiar with each other's cabinets of insects. Thus it is possible that Dale was the first actually to capture the adult *machaon*, for when writing to him on 11th July 1696 (Sloane MS. 3332, f. 218), Petiver was surprised that Dale had taken the insect (his reference was to the obvious description in Moffet, 1634). He commented that "I should be glad to see it being as yet a Stranger to me & as I thought to England." (It should be noted that recently Petiver had become acquainted with John Ray's cabinet, which suggests that Ray could not yet have captured the adult *machaon*, and perhaps that his Warwickshire specimen had not emerged. Of course Dale was familiar with Ray's collection, which he helped to augment.) Dale probably took his adult *machaon* during one of his collecting rambles in Essex. As it turned out in the next few years, when naturalists were combing southern England for new records, *machaon* was captured again and again. But we must remember that its distribution was then considerably wider than it is now; in the seventeenth century it probably could have been found over a great part of the island. Printed and manuscript sources indicate that *machaon* was even captured in and about London in the late seventeenth and early eighteenth centuries.

Curiously enough, when James Petiver published his first account of *machaon* in *Musei Petiveriani centuria quarta & quinta* (London, 1699), giving it the name of "The Royal William," he seems to have ignored Dale's capture, for after giving many citations from the literature he noted that "Mr. Ray tells me he hath observed this in the *North of England*, and the only one I have yet seen about *London*, was caught by my ingenious Friend Mr. *Tilleman Bobart*, in the *Royal Garden* at *St. James's* (p. 35). Ray's northern record has not been further verified, unless the Warwickshire larva was meant. Tilleman Bobart was among the more accomplished among seventeenth-century British entomologists, but little is known about him. He worked in the 'physic garden' at Oxford with his brother Jacob, and sent Ray his collections of insects. In 1703 Ray wrote to Hans Sloane that Tilleman Bobart was among others "more able and skilful" in the subject than himself (Raven, 1950). The origin of the common name "Royal William," which seems to have been in regular usage in the 1690's, is unknown, but *machaon* must have been, as the most splendid British butterfly yet discovered, honoured with the name of the monarch reigning at the time of the christening, William III (1689-1702).

Machaon was the first butterfly named in Samuel Dale's manuscript "Cataloge of English Butterflies Reduced to Mr. Ray's Method 1704," but Dale, who again called the insect the "Royal William," furnished no details about his earlier capture (Dale, 1704). Petiver, who also used the common name in his *Papilionum Britanniae* (London, 1717) commented that "This has been caught about *London* and divers *Countries*

in England, yet rarely" (p. 1). *Machaon* does not appear at all in the first extensive colour-plate work on British entomology, Eleazar Albin's *A natural history of English insects* (London, 1720). The omission is strange, as Albin was acquainted with the early entomologists who knew *machaon*, and he was certainly familiar with the literature. Benjamin Wilkes, in the set of plates first published in 1742 and usually called the "Twelve new designs of English butterflies," first named *machaon* as "*The Swallow-tail Butterfly*" in print, and we must suppose that after several reigns William's charisma had faded. In Wilkes' later publication, *The English moths and butterflies* (London, [1747 or 48?-49]) he gave evidence of the already diminishing range of *machaon*. Although Petiver could take the butterfly in London forty years before, Wilkes now had to go as far as "the Meadows and Clover Fields about *Cookham*, near *Westram*, in Kent," where with reasonable diligence the butterfly could be captured "without much Difficulty." *Machaon* had already been subjected to the rapid restriction of distribution which can be traced so dramatically in the records of the later eighteenth and nineteenth centuries.

References

- Albin, E. 1720. *A natural history of English insects*. London. British Library, Sloane MS. 3332.
 Dale, S., 1704. "Catalogue of English butterflies." MS. Royal Entomological Society of London.
 Moffet, T., 1634. *Insectorvm sire minnorum animalium theatrvm*. London.
 Petiver, J., 1699. *Musei Petiveriani centuria quarta & quinta*. London.
 ———, 1717. *Papilionum Britanniae*. London.
 Raven, C. E., 1950. *John Ray, naturalist*. 2nd ed. Cambridge.
 Ray, J., 1710. *Historia insectorum*. London.
 ———, 1848. *The correspondence of John Ray*. Ed. E. Lankester.
 Wilkes, B., 1742. "Twelve new designs of English butterflies." London.
 ———, [1747 or 48?-49]. *The English moths and butterflies*. London.

A REPORT OF THE BLACK-VEINED WHITE (*APORIA CRATAEGI* L.) NEAR EASTBOURNE, SUSSEX IN 1980. — Mrs. K. Platt (*Country Life*, 16.x.1980, **108** (4339): 1350; and *in litt.*) states that she and her husband saw three or four of this butterfly on the 15th July 1980, as they were walking across the downs from Eastbourne to Beachy Head. She writes me that the butterflies were at rest on Meadow Sweet in an open piece of ground by the low path as one approaches the Head, and that they watched them closely for about 15 minutes.

During a conversation which I had with Mrs. Platt, she remarked that the butterflies were resting with their wings open, that they were very attractive and that there was a lot of black in the markings. I suggested to her that it was perhaps more likely they were Marbled Whites (*Melanargia galatea* L.), upon which she agreed that they might have been that. The butterflies were not photographed, and no specimen was taken. — J. M. CHALMERS-HUNT.